UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
|---|---|---|---|---|
| 09/819,188 | 03/28/2001 | Thomas Michael Gooding | ROC920010087US1 | 2894 |

7590 06/13/2005

Gero G. McClellan
Thomason, Moser & Patterson, L.L.P.
3040 Post Oak Boulevard, Suite 1500
Houston, TX 77056-6582

| EXAMINER | |
|---|---|
| NGUYEN, VAN H | |

| ART UNIT | PAPER NUMBER |
|---|---|
| 2194 | |

DATE MAILED: 06/13/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

| Office Action Summary | Application No. | Applicant(s) | |
|---|---|---|---|
| | 09/819,188 | GOODING, THOMAS MICHAEL | |
| | Examiner | Art Unit | |
| | VAN H. NGUYEN | 2194 | |

*-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --*

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

1)☒ Responsive to communication(s) filed on *17 January 2005*.

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

4)☒ Claim(s) *1-4,6-15,17-21,23-31,33 and 34* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-4,6-15,17-21,23-31,33 and 34* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

**Application Papers**

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

## DETAILED ACTION

1. Claims 1-4, 6-15, 17-21, 23-31, and 33-34 are presented for examination.

### *Information Disclosure Statement*

2. The Applicants' Information Disclosure Statement, filed November 16, 2004, has been received, entered into the record, and considered. See attached form PTG 1449.

### *Claim Rejections - 35 USC § 103*

3. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

4. Claims 1-4, 6-15, 17-21, 23-31, and 33-34 are rejected under 35 U.S.C. 103(a) as being unpatentable over **Wang et al.** (U.S. 6, 708, 223).

5. **As to claim 1**, Wang teaches the invention substantially as claimed including a method for transmitting local node function parameters to a remote node for execution of the function on the remote node *(col.2, lines 36-51),* comprising:

associating a representation string with function parameters on a first stack, wherein each character in the representation string corresponds to a data type of an individual function parameter on the first stack (*fig.3A and associated text*); and

dereferencing pointer parameters on the first stack *(col.8, lines 43-57);*

generating a pure value buffer with the function parameters and the dereferenced pointer parameters *(col.8, lines 58-65)*; and

transmitting the pure value buffer to the remote node *(col.8, line 65-col.9, line 13).*

While Wang teaches that the marshalling layer copies any immediate data in the parameter set into the buffer (col.8, lines 58-62), Wang does not specifically use the term *flattening* and *flattened.*

It would have been obvious to one of ordinary skill in the art to have applied the teachings of Wang to include the features as claimed because Wang's teachings would have provided the capability for facilitating the remote execution of the function on the server, and maximizing the efficiency of RPC flow control.

The fact that Wang's teachings "the proxy marshals the call parameters into an RPC buffer" (col.2, lines 44-45) and "to perform marshalling, the proxy copies immediate data from the parameter set 125 and additional data 144 to an RPC buffer 123 for transmission" (col.9, lines 14-16) and the purpose of *marshalling* (the call parameters) and *copying* (immediate data from the parameter set 125 and additional data 144 to an RPC buffer 123 for transmission) in Wang suggests *flattening* (the pure value buffer).

6. **As to claim 2**, Wang teaches associating the representation string further comprises generating a DTSTRUCT string (*col.8, lines 44-55*).

7. **As to claim 3**, Wang teaches assigning a specific text string character to each function parameter data type on the first stack, wherein the assigning is conducted by at least one of a user input and a compiler generation operation *(col.8, lines 47-57).*

8. **As to claim 4**, Wang teaches retrieving data represented by the pointer parameters and placing the data represented by the pointer parameters on the pure value buffer *(col.8, lines 52-62)*.

9. **As to claim 6**, Wang teaches eliminating remote node write only-type data from the pure value buffer prior to transmitting the pure value buffer to the remote node *(col.11, lines 31-42)*.

10. **As to claim 7**, Wang teaches eliminating local node read only-type data from the pure value buffer node *(col.11, lines 31-42)*.

11. **As to claim 8**, Wang teaches receiving the pure value buffer at the remote node (col.8, line 60-col.9, line 12); generating a second stack on the second node mirroring the first stack on the first node *(see fig.3B and associated text)*; executing a function using the second stack; creating a return pure value buffer; and transmitting the return pure value buffer to the first node *(col.2, lines 44-51 and figs.7-8)*.

12. **As to claim 9**, Wang teaches using the representation string to recreate the second stack *(col.8, lines 45-57 and col.9, lines 10-13)*.

13. **As to claim 10**, Wang teaches receiving the return pure value buffer on the first node; regenerating the first stack on the first node; and replacing each pointer that was written back in an original memory location pointed to by the first stack *(see fig.7)*.

14. **As to claims 18-21 and 23-27,** note the rejection of claims 1-4 and 6-10 above. Claims 18-21 and 23-27 are the same as claims 1-4 and 6-10, except claims 18-21 and 23-27 are computer readable medium claims and claims 1-4 and 6-10 are method claims.

15. **As to claim 11**, the rejection of claim 1 above is incorporated herein in full. Additionally, Wang further teaches eliminating second node write only-type data from the pure value buffer node *(col.11, lines 31-42)*.

16. **As to claim 12**, Wang teaches generating a stack having the function related data further comprises retrieving the function related data from various memory locations and storing the function related data in a contiguous stack location *(col.3, lines 14-51)*.

17. **As to claim 13**, Wang teaches retrieving pure value data represented by the pointer parameters and storing the pure value data on the stack *(see figs. 3A and 3B)*.

18. **As to claim 14**, Wang teaches inserting pure value data into the stack in place of the pointer parameters and copying the stack contents to the pure value buffer *(see fig.3A and associated text on col.8, lines 43-62)*.

19. **As to claim 15**, refer to the discussion of claim 1 above for rejection of "flattening the pure value buffer."

20. **As to claim 17**, refer to the discussion of claim 7 above for rejection of "eliminating first node read only-type data from the pure value buffer prior to transmitting the pure value buffer to the second node."

21. **As to claim 28,** the rejection of claim 11 above is incorporated herein in full. Additionally, Wang further teaches removing local node read only-type data from the pure value buffer *(col.11, lines 31-42)*.

22. **As to claims 29-31 and 33-34,** note the rejection of claims 12-15 and 17 above. Claims 29-31 and 33-34 are the same as claims 12-15 and 17, except claims 29-31 and 33-34 are computer readable medium claims and claims 12-15 and 17 are method claims.

***Response to Arguments***

23. Applicant's arguments filed March 21, 2005 have been fully considered but they are not persuasive.

24. In the remarks, Applicant argued in substance that (a) Wang fails to teach associating a representation string with function parameters on a first stack, wherein each character in the representation string corresponds to a data type of an individual function parameter on the first stack; (b) dereferencing pointer parameters in function related data with a representation structure; (c) Wang's marshaling of the data into buffers is not in any way taught, shown, or suggested as a flattening process.

25. Examiner respectfully traverses Applicant's remarks.

(i) As to point (a), Wang's teaching:

> "the marshalling layer 122, in FIG. 3A, using the NDR standard, marshals data 144 by reading parameters, such as pointers to arrays, or pointers to integers, placed by the DCOM client 120 onto the memory stack 121 of the client computer 70. As is known by those skilled in the art, a call to a function passes parameters including immediate data values, such as integers or floating-point numbers, and pointers to additional data, such as pointers to arrays of data, pointers to text strings, or pointers to complex data structures. Therefore, when the DCOM client 120 makes a call to the DCOM server 142, it places onto the stack 121 a parameter set 125 include immediate data and pointers for the current call. The pointers in the parameter set 125 on the stack 121 point to the data 144 which is in the client computer memory 145." (col. 8, lines 43-57)

reads-on "associating a representation string with function parameters on a first stack, wherein each character in the representation string corresponds to a data type of an individual function parameter on the first stack" as claimed by Applicant.

(ii) As to point (b), Wang teaches dereferencing pointer parameters in function related data with a representation structure (using the NDR standard, marshals data 144

by reading parameters, such as pointers to arrays, or pointers to integers, placed by the DCOM client 120 onto the memory stack 121 of the client computer 70; col. 8, lines 44-47).

(iii) As to point (c), although, Wang does not specifically use the term "flattening", Wang's marshaling process does suggest "flattening process" as broadly claimed by Applicant. The scope of the claimed "flattening" clearly transcends the more narrow scope that Applicant attempts to impute through argument. Claimed subject matter, not the specification is the measure of the invention. Limitations in the specification cannot be read into the claims for the purpose of avoiding the prior art, In re Self, 213 USPQ 1 (CCPA 1982), In re Priest, 199 USPQ 11 (1978). The recited "flattening" is clearly subject to a broad interpretation as detailed in the rejections maintained above. The Examiner has a duty and responsibility to the public and to Applicant to interpret the claims as broadly as reasonably possible during prosecution. In re Prater, 415 F.2d 1 393, 1404-05, 162 USPQ 541, 550-51 (CCPA 1969).

During patent examination, the pending claims must be "given their broadest reasonable interpretation consistent with the specification." In re Hyatt 21 1 F.3d 1367, 1372, 54 USPQ2d 1664, 1667 (Fed. Cir. 2000). Applicant always has the opportunity to amend the claims during prosecution, and broad interpretation by the examiner reduces the possibility that the claim, once issued, will be interpreted more broadly than is justified. In re Prater, 415 F.2d 1393, 1404-05,

162 USPQ 541, 550-51 (CCPA 1969). See also In re Zletz, 893 F.2d 319, 321-22, 13 USPQ2d 1320, 1322 (1989) "During patent examination the pending claims must be interpreted as broadly as their terms reasonably allow.... The reason is simply that during patent prosecution when claims can be amended, ambiguities should be recognized, scope and breadth of language explored, and clarification imposed.... An essential purpose of patent examination is to fashion claims that are precise, clear, correct, and unambiguous. Only in this way can uncertainties of claim scope be removed, as much as possible, during the administrative process."

In considering "flattening", it is noted that Applicant uses terminology that has broad meaning in the art, and thus requires a broad interpretation of the claims in determining patentability of the disclosed invention. Although the claims are interpreted in light of the specification, limitations from the specification are not read into the claims. In re Van Geuns, 988 F.2d 1 181, 26 USPQ2d 1057 (Fed. Cir. 1993). Applicant should set forth claims in language that clearly, distinctly, unambiguously and uniquely define the invention. The fact that Applicant has not narrowed the definition/scope of the current claims implies that Applicant intends an extensive coverage breadth of the claims, which is clearly met by the cited prior art.

***Conclusion***

26. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

- Webb (US 6842786) teaches serializes or flattens a specified data value or values into a platform-independent data package or stream

- Lim et al. (US 6044409) teaches Framework for marshaling and unmarshaling argument object references.

- Goldsmith et al. (US 5491800) teaches flattening/unflattening parameters.

27. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

28. A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

29. Any inquiry or a general nature or relating to the status of this application should be directed to the TC 2100 Group receptionist: (571) 272-2100.

30. Any inquiry concerning this communication or earlier communications from the examiner should be directed to VAN H. NGUYEN whose telephone number is (571) 272-3765. The examiner can normally be reached on Monday-Thursday from 8:30AM - 6:00PM. The examiner can also be reached on alternative Friday.

31. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor Meng-Ai An can be reached on (571) 272-3756.

32. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

33. Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Any response to this action should be mailed to:
Commissioner for patents
P O Box 1450
Alexandria, VA 22313-1450

MENG-AI T. AN
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 2100

vhn